IFWO

```
 3 <110> APPLICANT: Eakle, Kurt
 4         Hope, Thomas
 5         Choi, Eun-A
 6         Homan, Jane
 7         Bremel, Robert D.
 9 <120> TITLE OF INVENTION: Transgenic Animals Expressing Transdominant Negative
roviral
10        Nucleic Acids and Proteins
12 <130> FILE REFERENCE: GALA-08729
14 <140> CURRENT APPLICATION NUMBER: 10/764,201
15 <141> CURRENT FILING DATE: 2004-01-23
17 <160> NUMBER OF SEQ ID NOS: 18
19 <170> SOFTWARE: PatentIn version 3.2
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 471
23 <212> TYPE: DNA
24 <213> ORGANISM: Bovine leukemia virus
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31 ccatcgatgc ctggtgcccc ctctgcgggc cccatgagcg actccaattc gaaaggatcg     180
33 acaccacgct cacctgcgag acccaccgta tcaactggac cgccgatgga cgaccttgcg     240
35 gcctcaatgg aacgttgttc cctcgactgc atgtctccga cacccgcccc caagggcccc     300
37 gacgactctg gatcaactgc ccccttccgg ccgttcgcgc tcagcccggc ccggtttcac     360
39 tttccccctt cgagcggtcc cccttccagc cctaccaatg ccaattgccc tcggcctcta     420
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45 <211> LENGTH: 156
46 <212> TYPE: PRT
47 <213> ORGANISM: Bovine leukemia virus
49 <400> SEQUENCE: 2
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55 Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
56              20                  25                  30
59 Pro Trp Phe Cys Pro Met Met Ser Pro Ser Met Pro Gly Ala Pro Ser
60           35                  40                  45
63 Ala Gly Pro Met Ser Asp Ser Asn Ser Lys Gly Ser Thr Pro Arg Ser
64      50                  55                  60
67 Pro Ala Arg Pro Thr Val Ser Thr Gly Pro Pro Met Asp Asp Leu Ala
68 65                  70                  75                  80
71 Ala Ser Met Glu Arg Cys Ser Leu Asp Cys Met Ser Pro Arg Pro Ala
72                  85                  90                  95
75 Pro Lys Gly Pro Asp Asp Ser Gly Ser Thr Ala Pro Phe Arg Pro Phe
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RAW SEQUENCE LISTING   DATE: 08/19/2004
PATENT APPLICATION: US/10/764,201   TIME: 15:29:23

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Output Set: N:\CRF4\08192004\J764201.raw

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79 Ala Leu Ser Pro Ala Arg Phe His Phe Pro Pro Ser Ser Gly Pro Pro
80         115              120                   125
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84      130              135              140
87 Pro Leu Ser Gly Thr Ala Phe Phe Pro Gly Thr Thr
88 145             150                  155
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92 <211> LENGTH: 471
93 <212> TYPE: DNA
94 <213> ORGANISM: Bovine leukemia virus
96 <400> SEQUENCE: 3
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101 ccatcgatgc ctggtgcccc ctctgcgggc cccatgagcg actccaattc gaaaggatcg   180
103 acaccacgct cacctgcgag acccaccgta tcaactggac cgccgatgga cgaccttgcg   240
105 gcctcaatgg aacgttgttc cctcgactgc atgtctccga cacccgcccc caagggcccc   300
107 gacgactctg gatcaactgc ccccttccgg ccgttcgcgc tcagcccggc ccggtttcac   360
109 tttcccccctt cgagcggtcc cccttccagc cctaccaatg ccaattgccc tcggcctcta   420
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117 <213> ORGANISM: Bovine leukemia virus
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124 ccatcgatgc ctggtgcccc ctctgcgggc cccatgagcg actccaattc gaaaggatcg   180
126 acaccacgct cacctgcgag acccaccgta tcaactggac cgccgatgga cgaccttgcg   240
128 gcctcaatgg aacgttgttc cctcgactgc atgtctccga cacccgcccc caagggcccc   300
130 gacgactctg gatcaactgc ccccttccgg ccgttcgcgc tcagcccggc ccggtttcac   360
132 tttcccccctt cgagcggtcc cccttccagc cctaccaatg ccaattgccc tcggcctcta   420
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138 <211> LENGTH: 471
139 <212> TYPE: DNA
140 <213> ORGANISM: Bovine leukemia virus
142 <400> SEQUENCE: 5
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147 ccatcgatgc ctggtgcccc ctctgcgggc cccatgagcg actccaattc gaaaggatcg   180
149 acaccacgct cacctgcgag acccaccgta tcaactggac cgccgatgga cgaccttgcg   240
151 gcctcaatgg aacgttgttc cctcgactgc atgtctccga cacccgcccc caagggcccc   300
153 gacgactctg gatcaactgc ccccttccgg ccgttcgcgc tcagcccggc ccggttagat   360
155 cttcccccctt cgagcggtcc cccttccagc cctaccaatg ccaattgccc tcggcctcta   420
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161 <211> LENGTH: 606
162 <212> TYPE: DNA
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170 tggtgccccc tctgcgggcc ccatgagcga ctccaattcg aaaggatcga caccacgctc   180
172 acctgcgaga cccaccgtat caactggacc gccgatggac gaccttgcgg cctcaatgga   240
174 acgttgttcc ctcgactgca tgtctccgag acccgcccccc aagggccccg acgactctgg   300
176 atcaactgcc cccttccggc cgttcgcgct cagcccggcc cggttagatc ttccccccttc   360
178 gagcggtccc ccttccagcc ctaccaatgc caattgccct cggcctctag cgacggttgc   420
180 cccattatcg ggcacggcct tcttccctgg aacaacttag taacgcatcc tgtcctcaga   480
182 aaagtcctta tattaaatca aatgggacct cgaggggggg cccgaattcc ggatctttgt   540
184 gaaggaacct tacttctgtg gtgtgacata attggacaaa ctacctacag agatttaaag   600
186 ctctaa   606
189 <210> SEQ ID NO: 7
190 <211> LENGTH: 105
191 <212> TYPE: DNA
192 <213> ORGANISM: Bovine leukemia virus
194 <400> SEQUENCE: 7
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200 <210> SEQ ID NO: 8
201 <211> LENGTH: 156
202 <212> TYPE: PRT
203 <213> ORGANISM: Bovine leukemia virus
205 <400> SEQUENCE: 8
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211 Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
212   20   25   30
215 Pro Arg Ser Cys Pro Met Met Ser Pro Ser Met Pro Gly Ala Pro Ser
216   35   40   45
219 Ala Gly Pro Met Ser Asp Ser Asn Ser Lys Gly Ser Thr Pro Arg Ser
220   50   55   60
223 Pro Ala Arg Pro Thr Val Ser Thr Gly Pro Pro Met Asp Asp Leu Ala
224 65   70   75   80
227 Ala Ser Met Glu Arg Cys Ser Leu Asp Cys Met Ser Pro Arg Pro Ala
228   85   90   95
231 Pro Lys Gly Pro Asp Asp Ser Gly Ser Thr Ala Pro Phe Arg Pro Phe
232   100   105   110
235 Ala Leu Ser Pro Ala Arg Phe His Phe Pro Pro Ser Ser Gly Pro Pro
236   115   120   125
239 Ser Ser Pro Thr Asn Ala Asn Cys Pro Arg Pro Leu Ala Thr Val Ala
240   130   135   140
243 Pro Leu Ser Gly Thr Ala Phe Phe Pro Gly Thr Thr
244 145   150   155
247 <210> SEQ ID NO: 9
248 <211> LENGTH: 156
249 <212> TYPE: PRT
250 <213> ORGANISM: Bovine leukemia virus

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Output Set: N:\CRF4\08192004\J764201.raw

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258 Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
259             20                  25                  30
262 Pro Trp Phe Cys Pro Asp Leu Ser Pro Ser Met Pro Gly Ala Pro Ser
263             35                  40                  45
266 Ala Gly Pro Met Ser Asp Ser Asn Ser Lys Gly Ser Thr Pro Arg Ser
267         50                  55                  60
270 Pro Ala Arg Pro Thr Val Ser Thr Gly Pro Pro Met Asp Asp Leu Ala
271 65                  70                  75                  80
274 Ala Ser Met Glu Arg Cys Ser Leu Asp Cys Met Ser Pro Arg Pro Ala
275                 85                  90                  95
278 Pro Lys Gly Pro Asp Asp Ser Gly Ser Thr Ala Pro Phe Arg Pro Phe
279             100                 105                 110
282 Ala Leu Ser Pro Ala Arg Phe His Phe Pro Pro Ser Ser Gly Pro Pro
283             115                 120                 125
286 Ser Ser Pro Thr Asn Ala Asn Cys Pro Arg Pro Leu Ala Thr Val Ala
287         130                 135                 140
290 Pro Leu Ser Gly Thr Ala Phe Phe Pro Gly Thr Thr
291 145                 150                 155
294 <210> SEQ ID NO: 10
295 <211> LENGTH: 156
296 <212> TYPE: PRT
297 <213> ORGANISM: Bovine leukemia virus
299 <400> SEQUENCE: 10
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302 1               5                   10                  15
305 Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
306             20                  25                  30
309 Pro Trp Phe Cys Pro Met Met Ser Pro Ser Met Pro Gly Ala Pro Ser
310             35                  40                  45
313 Ala Gly Pro Met Ser Asp Ser Asn Ser Lys Gly Ser Thr Pro Arg Ser
314         50                  55                  60
317 Pro Ala Arg Pro Thr Val Ser Thr Gly Pro Pro Met Asp Asp Leu Ala
318 65                  70                  75                  80
321 Ala Ser Met Glu Arg Cys Ser Leu Asp Cys Met Ser Pro Arg Pro Ala
322                 85                  90                  95
325 Pro Lys Gly Pro Asp Asp Ser Gly Ser Thr Ala Pro Phe Arg Pro Phe
326             100                 105                 110
329 Ala Leu Ser Pro Ala Arg Leu Asp Leu Pro Pro Ser Ser Gly Pro Pro
330             115                 120                 125
333 Ser Ser Pro Thr Asn Ala Asn Cys Pro Arg Pro Leu Ala Thr Val Ala
334         130                 135                 140
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338 145                 150                 155
341 <210> SEQ ID NO: 11
342 <211> LENGTH: 201
343 <212> TYPE: PRT
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RAW SEQUENCE LISTING   DATE: 08/19/2004
PATENT APPLICATION: US/10/764,201   TIME: 15:29:23

Input Set : A:\08729~1.txt
Output Set: N:\CRF4\08192004\J764201.raw

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346 <400> SEQUENCE: 11
348 Met Pro Lys Lys Arg Arg Ser Arg Arg Pro Gln Pro Ile Ile Arg
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352 Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
353   20   25   30
356 Pro Arg Ser Val Thr Ile Asp Ala Trp Cys Pro Leu Cys Gly Pro His
357   35   40   45
360 Glu Arg Leu Gln Phe Glu Arg Ile Asp Thr Thr Leu Thr Cys Glu Thr
361   50   55   60
364 His Arg Ile Asn Trp Thr Ala Asp Gly Arg Pro Cys Gly Leu Asn Gly
365 65   70   75   80
368 Thr Leu Phe Pro Arg Leu His Val Ser Glu Thr Arg Pro Gln Gly Pro
369   85   90   95
372 Arg Arg Leu Trp Ile Asn Cys Pro Leu Pro Ala Val Arg Ala Gln Pro
373   100   105   110
376 Gly Pro Val Arg Ser Ser Pro Phe Glu Arg Ser Pro Phe Gln Pro Tyr
377   115   120   125
380 Gln Cys Gln Leu Pro Ser Ala Ser Ser Asp Gly Cys Pro Ile Ile Gly
381   130   135   140
384 His Gly Leu Leu Pro Trp Asn Asn Leu Val Thr His Pro Val Leu Arg
385 145   150   155   160
388 Lys Val Leu Ile Leu Asn Gln Met Gly Pro Arg Gly Gly Ala Arg Ile
389   165   170   175
392 Pro Asp Leu Cys Glu Gly Thr Leu Leu Leu Trp Cys Asp Ile Ile Gly
393   180   185   190
396 Gln Thr Thr Tyr Arg Asp Leu Lys Leu
397   195   200
400 <210> SEQ ID NO: 12
401 <211> LENGTH: 35
402 <212> TYPE: PRT
403 <213> ORGANISM: Bovine leukemia virus
405 <400> SEQUENCE: 12
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408 1   5   10   15
411 Trp Gln Val Leu Leu Val Gly Gly Pro Thr Leu Tyr Met Pro Ala Arg
412   20   25   30
415 Pro Arg Ser
416   35
419 <210> SEQ ID NO: 13
420 <211> LENGTH: 133
421 <212> TYPE: PRT
422 <213> ORGANISM: Human T-cell leukemia virus
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430 Pro Thr Pro Trp Pro Thr Ser Gln Gly Leu Asp Arg Val Phe Phe Ser
431   20   25   30
434 Asp Thr Gln Ser Thr Cys Leu Glu Thr Val Tyr Lys Ala Thr Gly Ala

VERIFICATION SUMMARY   DATE: 08/19/2004
PATENT APPLICATION: **US/10/764,201**   TIME: 15:29:24

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